CLAIMS:

1. A method of simulating a creature for use in two different complexities of simulation, the method comprising utilising a model of the creature that comprises at least two portions,
a first portion which contains functions for use in both of said different complexities of simulation; and
a second portion comprising two alternative versions, a first version for use in one of said different complexities of simulation, and a second version for use in the other of said different complexities of simulation.

2. A method as claimed in claim 1, wherein said first portion comprises a behaviour selection mechanism arranged to select the behaviour of said creature.

3. A method as claimed in claim 2, wherein said behaviour selection mechanism is arranged to select the behaviour based upon at least one of: the current behavioural state; one or more internal state variables of the creature; the environment surrounding the creature; one or more sensory inputs to said creature.

4. A method as claimed in claim 2, wherein said behaviour selection mechanism consists of a set of mutually exclusive behavioural states.

5. A method as claimed in claim 1, wherein the second version is for use in the less complex of the simulations, and is arranged to approximate the functionality of the first version.

6. A method as claimed in claim 1, wherein the first version utilises a neural network.

7. A method as claimed in claim 2, wherein said second portion is arranged to execute the selected behaviour.

8. A method as claimed in claim 1, wherein the first version utilises a three dimensional physical simulation of the animat, and the second version utilises a parameterised model of the animat to approximate movement.

9. A method of simulating the activities of a plurality of creatures, the method comprising utilising at least two modes of simulation: a first mode arranged to simulate the activities of all of said creatures; and a second mode arranged to simulate the activity of at least one of said creatures at a more detailed level than said first mode; wherein the model of a creature simulated in both modes of simulation comprises at least two portions:
a first portion which contains functions arranged for use in both of said modes of simulation; and
a second portion comprising two alternative versions, a first version for use in said first mode of simulation, and a second version for use in the second mode.

10. A method of simulating a process at two different levels of complexity, the method comprising utilising a model that comprises at least two portions,
a first portion which contains functions for use in both of said different complexities of simulation; and
a second portion comprising two alternative versions, a first version for use in one of said different

complexities of simulation, and a second version for use in the other of said different complexities of simulation.

11. A method as claimed in claim 10, further comprising evaluating one or more conditions to determine a result of a rule for selecting which of the two alternative versions of the second portion to use in simulating the process.

12. A method as claimed in claim 10, wherein the second version is for use in the less complex of the simulations, and is arranged to approximate the functionality of the first version.

13. A method as claimed in claim 10, wherein the first version utilises a neural network.

14. A simulator device arranged to simulate a creature in two different complexities of simulation; the device being arranged to utilise a model of the creature that comprises at least two portions;
a first portion which contains functions used in both of said different complexities of simulation; and
a second portion comprising two alternative versions, a first version used in one of said different complexities of simulation, and second version used in the other of said different complexities of simulation.